

AMENDMENTS TO THE CLAIMS

Please incorporate the following amendments to claims 1, 3, 4, 8, 10, 11, 13, 14, 16 and 17 of the above-referenced application and add new claim 20. In accordance with 37 C.F.R. §1.121, a claim listing including the status and text of all claims (as currently amended) appears below. In making these amendments, no new matter is added.

1. (Currently Amended) A sensor assembly, comprising:
a substrate with at least one acoustic wave resonator provided thereon,
wherein said at least one acoustic wave resonator is configured to provide an electrical output signal indicative of an associated physical parameter;
a pointed projection provided on and extending from a selected location on said substrate; and
a casing assembly for providing a sealed package around said substrate and components provided thereon;
wherein at least a portion of said casing assembly forms a recessed surface area capable of flexing to interface with the pointed projection provided on and extending from athe selected location on said substrate.
2. (Original) The sensor assembly of claim 1, further comprising two additional acoustic wave resonators provided on said substrate.
3. (Currently Amended) The sensor assembly of claim 2, wherein said acoustic wave resonators are surface acoustic wave (SAW) resonators, and wherein said resonators are configured to provide output signals indicative ~~of~~of pressure and temperature to which said sensor assembly is subjected.
4. (Currently Amended) The sensor assembly of claim 1, further comprising an antenna coupled to said at least one resonator for facilitating the transmission of said electrical output signals therefrom.
5. (Original) The sensor assembly of claim 1, wherein said projection is formed on said substrate via photolithography.
6. (Original) The sensor assembly of claim 1, wherein said projection is

attached to said substrate via an adhesive.

7. (Original) The sensor assembly of claim 1, wherein said substrate comprises quartz.

8. (Currently Amended) A sensor assembly, comprising:
a piezoelectric substrate with at least one acoustic wave resonator element provided thereon, wherein said at least one acoustic wave resonator element is configured to provide an electrical output signal indicative of an associated physical parameter;

a projection provided on and extending from a selected location on said piezoelectric substrate;

a first casing portion for providing a rigid base to support said piezoelectric substrate; and

a second casing portion for providing a flexible lid configured for adjacent positioning to said first casing portion such that said first and second casing portions form an enclosure for said piezoelectric substrate and components provided thereon;

wherein a substantially flat indentation area is formed in said second casing portion, said substantially flat indentation area being ~~configured to selectively interface in continuous contact~~ with the projection provided on and extending from ~~at the~~ selected location on said piezoelectric substrate;

and wherein the electrical output signal from said at least one acoustic wave resonator element is capable of varying within a continuous range based on the level of force between said substantially flat indentation area and said projection.

9. (Original) The sensor assembly of claim 8, further comprising two additional acoustic wave resonator elements provided on said piezoelectric substrate.

10. (Currently Amended) The sensor assembly of claim 9, wherein said acoustic wave resonator elements are surface acoustic wave (SAW) resonator elements, and wherein said resonator elements are configured to provide output signals indicative ~~of~~ pressure and temperature to which said sensor assembly is subjected.

11. (Currently Amended) The sensor assembly of claim 8, further comprising an antenna coupled to said at least one resonator element for facilitating the

transmission of said electrical output signals therefrom.

12. (Original) The sensor assembly of claim 8, wherein said substantially flat indentation area is at least about twelve square micrometers.

13. (Currently Amended) The sensor assembly of claim 8, wherein ~~selected~~one or more of said first and second casing ~~assemblies~~portions and said projection comprise a metallic material.

14. (Currently Amended) A tire assembly, comprising:
a pneumatic tire structure;
a sensor assembly mounted to said pneumatic tire structure, said sensor assembly comprising:

a substrate with at least one acoustic wave resonator element provided thereon, wherein said at least one acoustic wave resonator element is configured to provide an electrical output signal indicative of an associated physical parameter;

a projection provided on and extending from a selected location on said substrate; and

a casing assembly for providing a sealed package around said substrate and components provided thereon;

wherein at least a portion of said casing assembly forms a recessed surface area ~~capable of flexing to interface~~provided in continuous contact with ~~the~~said projection and configured for withstanding varied levels of force between the recessed surface area and the projection~~provided on and extending from a selected location on said substrate.~~

15. (Original) The tire assembly of claim 14, wherein said sensor assembly further comprises two additional acoustic wave resonator elements provided on said substrate.

16. (Currently Amended) The tire assembly of claim 14, wherein said acoustic wave resonator elements are surface acoustic wave (SAW) resonator elements, and wherein said resonator elements are configured to provide output signals indicative ~~of~~ pressure and temperature to which said sensor assembly is subjected.

17. (Currently Amended) The tire assembly of claim 14, further comprising an antenna coupled to said at least one resonator element for facilitating the transmission of said electrical output signals therefrom.

18. (Original) The tire assembly of claim 14, wherein said casing assembly comprises a first casing portion for providing a rigid base to support said substrate and a second casing portion for providing a flexible lid configured for adjacent positioning to said first casing portion such that said first and second casing portions form an enclosure for said substrate and components provided thereon.

19. (Original) The tire assembly of claim 18, wherein said recessed surface area is formed in said second casing portion.

20. (New) The sensor assembly of claim 1, wherein said recessed surface area and said pointed projection are in continuous contact and are configured for subjection to varied levels of applied force therebetween.